



# TRAINING COURSE: MARIADB COLUMNSTORE

This course teaches experienced database administrators how to install and use MariaDB ColumnStore, a MariaDB storage engine that enables you to run business analytics and transactional processes simultaneously. Students will learn how to deploy and manage ColumnStore, bulk-import large amounts of data and import data in parallel and automatically.

## COURSE HIGHLIGHTS

Students will learn a wide range of skills related to ColumnStore, including the following:

- Discuss the fundamentals of parallel processing and gain an understanding of the different topology options of MariaDB ColumnStore
- Describe ColumnStore's storage architecture
- Understand how queries are executed and which data types are supported in ColumnStore
- Install and configure ColumnStore on a single node and multiple nodes
- Discuss the available logging in ColumnStore
- Plan for and perform an upgrade from a previous ColumnStore version
- Discuss typical import methods; e.g., using the `INSERT` and `LOAD DATA INFILE` statements
- Use `CPIMPORT` and its three modes for faster bulk importing
- Migrate an existing analytical database to MariaDB via ColumnStore
- Use administrative system commands and CMAPI for advanced management tasks
- Discuss SQL features, including window functions and cross-engine joins
- Understand encrypted connections and data-at-rest encryption
- Discuss system-level security considerations
- Back up and restore MariaDB ColumnStore data
- Understand performance tuning considerations such as data modeling, sizing recommendations, memory management, multi-table and disk-based joins, and disk-based aggregation
- Analyze individual queries using the `calGetStats` function
- Enable and collect ColumnStore query statistics history
- Locate and use ColumnStore troubleshooting logs and utilities
- Diagnose startup problems and cross-engine support errors
- Understand high availability options at the node level, the storage level, and with the use of the MariaDB MaxScale database proxy

**Formats:** In-person course, live virtual, or on-demand course

**Length:** 3 days (6.5-hour sessions); self-paced for on-demand course

### Prerequisites:

- ☐ Completion of the MariaDB Standard DBA course or relevant working experience as a MariaDB database administrator
- ☐ Intermediate MariaDB skills
- ☐ Intermediate to advanced knowledge of databases in general

### Recommendation:

- ☐ Linux administration skills
- ☐ MariaDB server configuration and usage experience
- ☐ Familiarity with AWS VMs
- ☐ Familiarity with VirtualBox

- Discuss using S3 or GlusterFS for storage redundancy
- Integrate ColumnStore with MariaDB Enterprise
- Deploy a hybrid transactional/analytical processing (HTAP) topology

## LIVE LEARNING: ONLINE AND ON-SITE

MariaDB offers flexible training options so your team can learn the way that works best for them: online or on-site. The most popular option is the virtual classroom, where the course is delivered in a live virtual setting using technology such as Zoom. An instructor will speak during the class through an audio feed and will share screens on their computer, including a slide presentation and a terminal window. Students can interact with the instructor and other students via a text-chat interface and through their audio feeds. A copy of the slide presentation and lab exercises workbook will be provided so students may annotate them during class.

## READY TO START LEARNING?

[Register now](#) or [contact us to schedule an in-person class](#).

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Americas: [sales-AMER@mariadb.com](mailto:sales-AMER@mariadb.com)  
Europe, Middle East, Africa: [sales-EMEA@mariadb.com](mailto:sales-EMEA@mariadb.com)  
Asia Pacific: [sales-APAC@mariadb.com](mailto:sales-APAC@mariadb.com)

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